

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,138,983 B2
APPLICATION NO. : 09/769451
DATED : November 21, 2006
INVENTOR(S) : Masanori Wakai et al.

Page 1 of 4

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

DRAWINGS:

Sheet 11, Figure 11, Box S1104, "THERE OF" should read -- THEREOF --;
Sheet 44, Figure 44, Boxes S4401, S4402 and S4403, "POSITION-TO-POTITION"
should read -- POSITION-TO-POSITION --;
Sheet 79, Figure 76, Box S7604, "PREFORM" should read -- PERFORM --;
Sheet 84, Figure 81, Box S8101, "POSITIONAL" should read -- POSITIONAL
RELATIONSHIP --.
Sheet 86, Figure 83, Box S8308, "CHANGE" should read -- CHANGE --;
Sheet 93, Figure 90, Box S9001, "DETERCTING" should read -- DETECTING --;
Sheet 133, Figure 130, Box S13002, "PATES" should read -- PAGES --; and
Sheet 147, Figure 142, Box S14202, "ONDISTANCE" should read -- ON
DISTANCE --.

COLUMN 4:

Line 7, "are" should read -- is --;
Lines 25 and 30, "is" should read -- are --; and
Line 45, "are" should read -- is --.

COLUMN 7:

Line 67, "contract" should read -- contact --.

COLUMN 8:

Line 66, "remain" should read -- remains --.

COLUMN 9:

Line 12, "a effective" should read -- an effective --.

COLUMN 10:

Line 2, "point a" should read -- point b --; and
Line 59, "exist" should read -- exists --.

COLUMN 12:

Lines 26 and 45, "mount" should read -- amount --; and
Lines 46 and 48, "time t₁," should read -- time t₁ --.

COLUMN 13:

Line 26, "time t₁," should read -- time t₁ --; and
Line 47, "point points" should read -- points --.

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COLUMN 14:

Line 9, "designate" should read -- designated --.

COLUMN 15:

Line 66, "are" should read -- is --.

COLUMN 16:

Line 2, "Bt₁," should read -- Bt₁ -- and "shown" should read -- shown in --; and
Line 55, "Bt₁(6,3)" should read -- Bt₁(6,3) --.

COLUMN 17:

Line 28, "is" should read -- are --.

COLUMN 19:

Line 15, "are" should read -- is --.

COLUMN 20:

Lines 18, 22 and 25, "degree," should read -- degrees, --; and
Line 40, "18.43" should read -- 18.43° --.

COLUMN 21:

Lines 25, 28 and 31, "degree," should read -- degrees, --.

COLUMN 22:

Line 5, "Bt₁(4,6) should read -- Bt₁(4,6) --.

COLUMN 23:

Line 40, "A₅" should read -- At₅ --.

COLUMN 26:

Line 65, "be" should read -- be to --.

COLUMN 28:

Lines 23 and 40, "to" should read -- to be --.

COLUMN 29:

Lines 5 and 40, "preformed" should read -- performed --.

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COLUMN 30:

Line 32, "position" should read -- positions --;
Line 34, "position" (first occurrence) should read -- positions --;
Line 44, "fixed-to-moving position" should read -- fixed-to-moving-position --; and
Line 47, "fixed-to-moving" should read -- fixed-to-moving- --.

COLUMN 31:

Line 21, "point B" should read -- point C --.

COLUMN 32:

Line 46, "ad" should read -- at --;
Line 58, "(fixed-to-moving)" should read -- (fixed-to-moving-position) --; and
Line 59, "(fixed-to-fixed)" should read -- (fixed-to-fixed-position) --.

COLUMN 33:

Line 32, "ad" should read -- at --;
Line 33, "time t_5 " should read -- time t_5 , --; and
Line 43, "ad" should read -- at --.

COLUMN 34:

Line 10, "and c," should read -- and C, --; and
Lines 30 and 39, "ad" should read -- at --.

COLUMN 35:

Line 14, "At1" should read -- At₁ --;
Line 31, "resulting" should read -- resulting in --;
Line 42, "the an" should read -- on the --; and
Line 56, "is" should read -- are --.

COLUMN 37:

Line 62, "resulting" should read -- resulting in --.

COLUMN 39:

Line 55, "high" should read -- higher --;
Line 60, "contract" should read -- contact --; and
Line 63, "move to" should read -- to --.

COLUMN 40:

Line 3, "time t_1 " (second occurrence) should read -- time t_5 --.

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COLUMN 41:

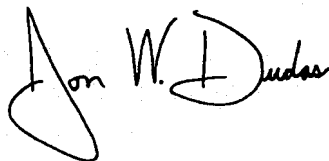
Line 5, 6 and 8, "speed" should read -- distance --;
Line 30, "Bt₁," should read -- Bt₁ --;
Line 32, "remains" should read -- remain --; and
Line 63, "A₆(2,2.5)" should read -- At₆(2,2.5) -- and "B₆(4,4)" should read -- Bt₆(4,4) --.

COLUMN 42:

Line 13, "standalone" should read -- stand-alone --; and
Line 43, "embodiment" should read -- embodiments --.

Signed and Sealed this

Twenty-fourth Day of July, 2007

A handwritten signature in black ink, appearing to read "Jon W. Dudas". The signature is stylized with a large, looped initial "J" and a distinct "D".

JON W. DUDAS
Director of the United States Patent and Trademark Office